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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,582	04/04/2006	Toshiya Hamada	284463US6PCT	9315
22850 7590 03/05/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER HARVEY, DAVID E				
ART UNIT 2621		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/574,582

Applicant(s)

HAMADA ET AL.

Examiner

DAVID E. HARVEY

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-9, 14-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-9, 14-17 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date 11/27/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The following is noted:

A) The examiner notes that the term "down-converter", as understood by the examiner, simply refers to circuitry for performing a process in which "original" frame of image/video data is sub-sampled (i.e., "down-converted") in order to produce a reduced-sized frame of image/video data that, when displayed on a display device, produced a reduced-sized "down-converted" image relative to that produced by the "original" frame of data. However, because this sub-sampling process violates the Nyquist criterion, appropriate "interpolative" filtering must be performed on the original image data in both the horizontal and vertical directions in order to produce an alias free down converted image.

B) The examiner maintains that the previously applied prior art of Kashigi et al (US Patent #4,218,710) simply exemplifies conventional "down-converter" circuitry of the type discussed above in part "A" of this paragraph.

C) In lines 14-17 on page 10 of the arguments filed 12/10/2009, applicant alleges that the described/claimed "down converter" of the instant invention is somehow different than, and distinguished from, circuitry that "merely" compresses pictures in the horizontal and vertical directions using interpolation filters and sub-sampling (i.e., as described by Kashigi et al).

As such, it is unclear to the instant examiner, as to how the recited "down converter" terminology has been used/defined by applicant's instant specification so as to be distinguished from any circuit that merely reduces the size of a video/image frame by sub-sampling as appears to be alleged via the arguments filed 12/10/2008.

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2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4-9, 14-16, 17, and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A) The examiner maintains that the intended scope/meaning/definition of the recited "down converter" recitation of the pending claims (e.g., @ line 11 of claim 1, @ line 10 of claim 17; @ line 11 of claim 19) is unclear from the instant disclosure given applicant's arguments filed 12/10/2009 [SEE paragraph 1 of this Office action];

B) The examiner notes that each of the instant claims appears to be directed to a structure that represents a combination of the Figure 8 embodiment of the instant specification and the Figure 12 embodiment of the instant specification. Some claims more than others (e.g., note claim 4). It is not clear where such mixed embodiments were described in the instant specification as originally filed; i.e., particularly in light of the above noted arguments pertaining to the recited "down converter" terminology; i.e., the Figure 8 embodiment, as described, appears to comprise circuitry which merely reduces the size of the image which, as argued by applicant, allegedly does not fall within the meaning of "down conversion as used/defined in the instant specification. Clarification is needed.

4. **The following references are again noted:**

1) US Patent #5,530,797 to Uya et al.:

Uya et al has been cited because, as is shown in Figures 1 and 2, it evidences a compositing system comprising:

- 1) A first VSP (@ 7A) for receiving and processing a first moving picture video signal, wherein the processing includes image magnification/reduction;
- 2) A first image/plane memory (@ 2A) for storing frames of the processed first video signal;
- 3) A second VSP (@ 7B) for receiving and processing a second moving picture video signal, wherein the processing includes image magnification/reduction;
- 4) A second image/plane memory (@ 2B) for storing frames of the processed first video signal;
- 5) A third image/plane memory (@ 1) for storing frames of a stating image signal;
- 6) Selection circuitry for selecting one a pixel-by-pixel basis which areas of the images stored in the image/plane memories are outputted and used (@ 9) to generate a combines video signal for display (@ 10);

wherein the selection performed by the selection means is controlled based on various windows and priority data supplied from respective memory elements (@ 3-5) .

2) European Patent Document #0,447,197 to Gengler et al:

As is shown in Figure 2, Gengler et al, describes a video signal compositing system which comprises:

- 1) An image frame buffer (e.g. @202), comprised of a first storage means (e.g., @ image data planes 0-7, 8-15, and 16-23), for receiving and storing frames of image data;
- 2) Said image frame buffer (e.g. @202), comprised of additional storage means (e.g., overlay planes 0-3), for storing frames of graphic overlay data;

3) A selection means (@ 206, 208, 210) for selecting outputs of from the first and second storage means on a area-by-area, i.e., pixel-by-pixel, basis; and

4) An a display (@ "TO DISPLAY") for displaying/generated a composite image from the data outputted by the selection means.

3) US Patent #6,888,577 to Waki et al:

Waki et al. has been cited as evidencing state-of-the-art which existed at the time of the instant invention. Specifically, Waki et al. evidences that those skilled in the digital television art understood that numerous image planes, representing different video and graphical images could be blended together in turn, i.e., from top to bottom, in order to produce a composite image frame for display on a TV receiver . [SEE: The discussion under the heading "Background Art" in columns 1 and 2 and, in particular, lines 50-67 of column 1 and lines 1-7 of column 2; and Figures 1A, 1B, 11, and 12]

4) US Patent #7,054,539 to Ito et al.:

Ito et al. has been cited because it illustrates compositing circuitry for use in a playback environment.

5) US Patent #6,741,794 to Sumioka et al:

As is shown in Figure 2, Sumioka et al. describes a video signal compositing system which, as shown in Figure 4, comprises a plurality of selection circuits for combining video images in a sequential manner.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al.

A) As is shown in Figure 11, Miyamoto et al discloses a reproduction device which includes:

- 1) A first plane memory (@ 1109);
- 2) A second plane memory (@ 1110);
- 3) A selection means (@ 1111, 1104);
- 4) A "down converter" (e.g., @ 1102);
- 5) A third plane memory (@ 1113);
- 6) A fourth plane memory (@ 1112);
- 7) A first combining means (@ 1105; 1106); and
- 8) A second combining means (@ 1107 and 1108).

B) Claim 1 differs from the showing of Miyamoto et al only in that:

- 1) The second plane memory of claim 1 received an additional moving/video image (i.e., it is described as a still image in Miyamoto et al);
- 2) The source of the content, as set forth in claim 1, is a recording medium (i.e., it is described as a broadcast signal in Miyamoto et al); and
- 3) As claim the data from the third plane memory is first combined with the video and then the data from the fourth plane memory is combined (i.e., the order is reversed in Miyamoto et al).

C) Obviousness:

- 1) As is evident via the showing of Uya et al, the examiner contends that it was notoriously well known in the art for content mixing circuitry, of the type described by Miyamoto et al, to have included a second moving image plane (i.e., as opposed to or in

addition to, the illustrated still image plane). The examiner maintained that it would have been obvious to one of ordinary skill in the art to have modified the second memory in Miyamoto et al to store a second moving image;

2) The examiner takes Official notice that it was notoriously well known in the art for conventional DVD players to have required the mixing content, received from a DVD, of the types described in Miyamoto et al. As such, it would have been obvious to one of ordinary skill in the art to have utilized the combining circuitry illustrated in Figure 11 of Miyamoto et al, modified by Uya et al, for its intended purpose within the "analogous" environment of a conventional DVD player;

3) The examiner maintains that one skilled would have recognized that there was not criticality in the order in which the different graphic planes are combined with the moving image data: i.e., as such, it would have been obvious to one of ordinary skill in the art to have reversed the order in which the third plane and the fourth plane are added in the modified system of Miyamoto et al.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al, in view of US Patent #5,530,797 to Uya et al, for the same reasons set forth above with respect to claim 1.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al, in view of US Patent #5,530,797 to Uya et al, for the same reasons set forth above with respect to claim 4, further in view of further in view of US Patent #6,661,426 to Jetha et al.

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the showing of Miyamoto et al, in accordance with the showing of Uya et al, for the reasons set forth above with respect to claim 4.

Claim 5 differs from the modified system of Miyamoto et al only in that claim 5 requires one of the stores to store wall paper picture data instead of moving picture data.

Jetha et al has been cited because it evidences that it was known, in the video image compositing arts, to have provided and utilized "wallpaper picture data" as a background image for the combined image signals [e.g., note lines 10-14 of column 4]. In light this showing, it would have

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been obvious to one of ordinary skill in the art to have provided a wallpaper picture signal to one of the frame stores in the modified system of Miyamoto et al as background image data for the combined image.

9. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al. for the same reasons set forth above with respect to claim 1.

The examiner maintains that the mixing ratios are "based on" the data that is mixed in at least the mixing ratio is necessarily set to mix the signals according to image position and/or image priority (e.g. note element 5 of Uya et al)

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al. for the same reasons set forth above with respect to claim 1. Additionally:

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the showing of Miyamoto et al. in accordance with the showing of Uya et al. for the reasons set forth above with respect to claim 1.

Claim 9 differs from the modified system of Miyamoto et al only in that claim 9 requires an additional frame/plane memory to be located at the output of the selection means.

The examiner takes Official Notice that it was well known in the video compositing art to have associated an additional frame/plane memory with the display device to compensate for differences in the refresh rate of the sources and the display rate of the display device. In light this conventional knowledge, it would have been obvious to one of ordinary skill in the art to have associated such a frame/plane memory with the display in the modified systems of Miyamoto et al to compensate for differences in display and refresh rates.

11. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al. for the same reasons set forth above with respect to claim 1. Additionally:**

The examiner maintains that the mixing ratios are "based on" the data that is mixed in at least the mixing ratio is necessarily set to mix the signals according to image position and/or image priority (e.g. note element 5 of Uya et al.)

The examiner notes that the priority information determines "transparency". Thus, any time/position at which one images (e.g., the reduced images) are displayed over/through another image inherently requires the non-displayed image to be transparent at that location.

12. **Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al. for the same reasons set forth above with respect to claim 14, further in view of further in view of US Patent #6,661,426 to Jetha et al.**

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the showing of Miyamoto et al. in accordance with the showing of Uya et al. for the reasons set forth above with respect to claim 14.

Claim 15 differs from the modified system of Miyamoto et al. only in that claim 15 requires one of the stores to store wall paper picture data instead of moving picture data.

Jetha et al. has been cited because it evidences that it was known, in the video image compositing arts, to have provided and utilized "wallpaper picture data" as a background image for the combined image signals [e.g., note lines 10-14 of column 4]. In light this showing, it would have been obvious to one of ordinary skill in the art to have provided a wallpaper picture signal to one of the frame stores in the modified system of Miyamoto et al. as background image data for the combined image; i.e., again the examiner notes that the priority information determines "transparency" and, as such, any time/position at which one images (e.g., the wallpaper image) is displayed over/through another image such inherently requires the non-displayed image to be transparent at that position/location. When the wallpaper image it not displayed over/through another image, it is display at "other" areas,

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al. for the same reasons set forth above with respect to claim 1.

14. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,496,278 to Miyamoto et al. in view of US Patent #5,530,797 to Uya et al. for the same reasons set forth above with respect to claim 1, further in view of the 1984 publication "Structured Computer Organization" by Tanenbaum.

Tanenbaum has been cited as evidencing the fact that those of ordinary skill in the art have long recognized hardware and software implementations of a given processing operation to be obvious and equivalent [note lines 10-13 of page 11]. In light of this showing, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have implanted the modified system of Miyamoto et al. using a software driven processor (i.e., wherein the software must necessary be stored via some type of processor readable medium).

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. HARVEY whose telephone number is (571) 272-7345. The examiner can normally be reached on M-F from 6:00AM to 3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Marsh D. Banks-Harold, can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DAVID E HARVEY/

Primary Examiner, Art Unit 2621

DAVID E HARVEY
Primary Examiner
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